

Rupert Jones's plate in 1870. This is a well-intentioned work, carefully planned, but not quite correctly carried out, by the industrious and, indeed, enthusiastic author. Some verbal errors, false concords, and occasional errors in the arrangement are met with; but we recommend it for the use of students of fossil Crustacea, if cautious in verifying references, wording, and classification.

PROCEEDINGS OF LEARNED SOCIETIES.

GEOLOGICAL SOCIETY.

January 8, 1890.—W. T. Blandford, LL.D., F.R.S.,
President, in the Chair.

The following communication was read:—

“On some British Jurassic Fish-remains referable to the Genera *Eurycormus* and *Hypsocormus*.” By A. Smith Woodward, Esq., F.G.S.

Hitherto our knowledge of the Upper Jurassic Fish-fauna has been mainly derived from specimens found in fine lithographic stones, where the various elements are in a state of extreme compression. Within the last few years remains of similar fish have been discovered in the Oxford and Kimeridge Clays of England, and these are of value for precise determination of certain skeletal features in the genera to which they belong.

The Author described *Eurycormus grandis* from the Kimeridge Clay of Ely, a large species which makes known for the first time the form and proportions of several of the head-bones in this genus. A technical description of all the bones the characters of which are distinguishable was given, and the Author concluded that there is considerable similarity between the head of *Eurycormus* and the recent Ganoid *Amia*, even to minute points of detail.

He further described *Hypsocormus tenuirostris* and *H. Leedsii* from the Oxford Clay of the neighbourhood of Peterborough, the osteology of this genus not having as yet been elucidated. Portions of the jaws have been discovered, affording valuable information as to the form and dentition of the principal elements.

These jaws are not precisely paralleled by any other Jurassic genus, though they possess a resemblance to *Pachycormus*, as also to the Upper Cretaceous genus, *Protosphyrena*.

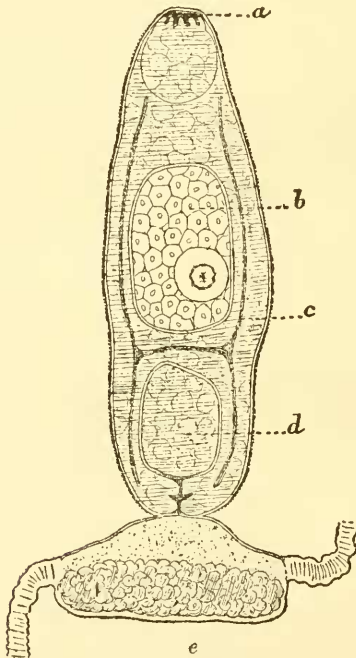
MISCELLANEOUS.

On *Bucephalus Haimeanus*. By M. L. HUEF.

THE animals belonging to the genus *Bucephalus* were first noticed by von Baer in *Anodontu anatina* and by Pagenstecher in *Unio pictorum*. This freshwater species was named *Bucephalus polymorphus*. In 1854 Prof. de Lacaze-Duthiers described a marine

species, *B. Haimeanus* (Ann. Sci. Nat. 4^e sér. tome i.), which he met with at the Balearic Islands, at Mahon, and also at Cette, in *Ostrea edulis* and *Cardium rusticum*. The author has frequently found the latter or a nearly allied species in *Cardium edule*, inhabiting the same regions of the body of the host, and presenting the same morphological characters.

The cockles in which the parasites are found have a sickly aspect, by which they may be easily recognized; their abdomen, which is normally firm, yellow, and opaque, becomes soft and whitish; "it has the aspect of an œdematized tissue, infiltrated with fluid" (Lacaze Duthiers, *l. c.*).



Bucephalus Haimeanus from *Cardium edule*.

a. Oral cup. b. Digestive cavity. c. Genital apparatus. d. Excretory organ. e. Caudal appendage.

On opening such a *Cardium* the lacunar tissue representing the general cavity is seen to contain an immense number of white filaments, several centimetres in length, branched, knotted about the intestinal loop, and pushing away the hepatic, renal, and genital glands; the atrophy of the last-named is especially marked.

These tubes, the *sporocysts*, cannot move, but they possess a certain amount of contractility. Within them are Cercariæ in all states of development. These are described by Lacaze-Duthiers. In fact the author can detect scarcely any difference between the parasites

found by the latter in *Cardium rusticum* and by himself in *C. edule*. The elongated flattened body is covered with a delicate membrane, finely striated transversely. At its narrower extremity is an unarmed mouth at the bottom of a sucking-cup. The author has observed no œsophageal tube, which is contrary to Lacaze-Duthiers's statement. In the middle region the body shows a closed cylindrical cavity lined with nucleated cells, and in this part there is also a second circular sucking-disk. The posterior part also has an interior cavity, smaller than that in the middle region, with which it has no communication, but having a cord running to an aperture at the base of the caudal lobe (see below). It is probably excretory. Between the anterior and posterior cavities there is a darker, granular, transverse band, from the lateral extremities of which similar bands are given off anteriorly and posteriorly, the whole representing a capital H. The author regards these as the first traces of genital glands.

The aboral extremity of the body bears a curious caudal appendage, composed of a voluminous median lobe, flattened transversely, and from which are given off on each side two filaments of great length and very contractile, capable of attaining many times the length of the body and then of retracting by rolling up.

Although during the months of November, December, January, and February this *Bucephalus* is to be met with in about 4 per cent. of the examples of *Cardium edule*, and a certain number of them always in the state above described, which the author regards as the adult Cercarian stage, the *Distomum* belonging to it could not be found in them; by the end of March all traces of the parasites disappear*.—*Bull. Soc. Linn. Norm.* sér. 4, vol. ii. p. 145 (1889), with a plate.

On the Formation of the Antherozoids in Eudorina elegans.

By M. P. A. DANGEARD.

The colonies of *Eudorina elegans* are composed of sixteen or thirty-two cells occupying the surface of a sphere, each possessing two long cilia, a nucleolated nucleus, an amyliiferous corpuscle, and a lateral red point; the colony moves by the agency of the cilia; asexual reproduction takes place by repeated bipartition of the cells.

The sexual colonies are male and female, the latter closely resembling the ordinary vegetative colonies, except that the contents of the cells are more opaque and their number may be reduced to four. In the male colonies each cell by successive bipartitions gives origin to thirty-two or sixty-four cells which remain united in the same plane, forming yellowish disks, which escape and move through the water often for a considerable time; when one of them falls in with a female colony the antherozoids composing it are set free;

* In a subsequent note M. Huet records his observations upon another Cercarian parasite of *Cardium edule*, which he was also unable to trace to maturity.